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April 12, 2005

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New York, NY 10007-1866

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U.S. Environmental Protection Agency
290 Broadway - 20th Floor
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PROJECT: RAC II Contract No.: 68-W-98-210
Work Assignment No.: 146-RICO-02PE

DOC. CONTROL NO.: 3223-146-PP-WKPN-05403

SUBJECT: Technical Work Plan Letter - Source Area Soil Gas Survey
Old Roosevelt Field Contaminated Groundwater Area Site
Nassau County, New York

Dear Mr. Rosado and Ms. Kwan:

CDM Federal Programs Corporation (CDM) is pleased to submit this technical Work Plan Letter to perform a source area soil gas survey at the Old Roosevelt Field Contaminated Groundwater Area site in Nassau County, New York.

If you have any questions regrading this Work Plan Letter, please contact me at (212) 785-9123 or Susan Schofield at (203) 262-6633.

Sincerely,

CDM FEDERAL PROGRAMS CORPORATION

Robert D. Goltz, P.E.
RAC II Program Manager

Enclosure

cc: D. Butler, EPA Region II
J. Litwin, CDM
B. Irons, CDM
S. Schofield, CDM
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RAC II Document Control

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OLD ROOSEVELT FIELD CONTAMINATED GROUNDWATER AREA SITE TECHNICAL WORK PLAN LETTER SOURCE AREA SOIL GAS SURVEY

The purpose of this Technical Work Plan Letter is to provide EPA with the technical details for the source area soil gas survey to be performed at the Roosevelt Field site. The concept for the source area soil gas survey was discussed with New York State Department of Environmental Conservation (NYSDEC), New York State Department of Health (NYSDOH), and Nassau County Health Department (NCHD) in a conference call on March 30, 2005. The purpose of the soil gas survey is to investigate whether residual sources of volatile organic compound (VOC) contamination are present in the unsaturated zone (acting as sources of contamination to the groundwater) in the areas where airfield buildings and airplane parking areas were located along Clinton Road and Old Country Road. All elements of the soil gas survey are described briefly below.

This work plan letter follows the work breakdown structure of the Final Work Plan. Only those tasks and subtasks affected by the addition of the source area soil gas survey are included below.

Task 1 - Project Planning

1.5 Negotiate and Revise Work Plan

CDM will prepare a Technical Work Plan Letter (this document) that describes the source area soil gas survey. In addition, CDM will prepare a Cost Work Plan Letter detailing the estimated costs for conducting the work under separate cover.

1.7 Quality Assurance Project Plan

CDM will prepare an addendum to the QAPP which details the procedures for conducting the soil gas survey.

1.8 Health and Safety Plan

CDM will add the soil gas survey to the tasks in the site-specific health and safety plan.

1.11 Subcontractor Procurement

CDM will procure a soil gas subcontractor. This subtask will include development of a detailed scope of work, followed by solicitation of bids from qualified subcontractor and award of the subcontract.

1.12 Perform Subcontract Management

CDM will manage the subcontract for the soil gas work.

1.13 Pathway Analysis Report

CDM will incorporate the analytical results from the soil vapor samples sent to the off-site

laboratory into the Pathway Analysis Report, as appropriate. A current-use exposure pathway for workers is already included for the Human Health Risk Assessment.

Task 3 - Field Investigation

3.5.2 Soil Gas Survey

The soil gas survey will be conducted in the areas that were formerly occupied by air field buildings and in areas where airplanes were parked, with the assumption that most aircraft maintenance (where solvent chemicals would have been used) was most likely to occur in those areas. Historical information (including Figure A-1) and a review of site historical photographs from the World War II years (1941 through 1945) indicate that airfield buildings occupied approximately 2,000 feet of Clinton Road (on the east side of the road) from the Clinton/Old Country Road intersection . Airfield buildings occupied a larger area along Old Country Road. One historical photograph from 1944 (Figure A-2) shows aircraft parked directly east of buildings along Clinton Road and south of buildings fronting on Old Country Road. However, construction of the Meadowbrook Parkway in the mid- to late-1950s covered the eastern airfield area along Old Country Road. Therefore, the soil gas survey will be conducted in the areas outlined on Figure A-3, approximately 2,000 feet along Clinton Road and 1,320 feet along Old Country Road, with the Meadowbrook Parkway entrance/exit ramps as the eastern boundary. The width of the soil gas survey area is approximately 700 feet.

In the area designated for the soil gas survey, a 100-foot by 100-foot grid (Figure A-4) will be laid out by CDM personnel. The grid will not be surveyed. Subsurface soil gas will be collected at the nodes of the grid. Numerous buildings are present within the grid area; these areas will be excluded from the soil gas survey. It is estimated that samples will be collected at 170 locations.

Soil vapor probes will be driven using direct push technology (DPT) to approximately 40 feet below the ground surface (bgs). The groundwater table is estimated to be between 40 and 50 feet bgs. Vapor samples will be collected from the probes at 15 feet bgs and 40 feet bgs. The vapor will be injected into a volatile organic vapor detector (e.g., photoionization detector [PID]) in the field. These types of instruments provide readings for total volatile organic compounds (VOCs). The readings will be recorded in the field logbook. Vapor samples from an estimated 20 per cent of the DPT pushes (i.e., 34 samples) will be collected in summa canisters and sent to an off-site laboratory for VOC analysis by method TO-15. The off-site laboratory analyses will provide results for specific VOCs. Vapor samples will collected from one background location (assumed to be in the same location as the background multiport monitoring well).

Details of sampling methodology, sampling equipment, and sampling QA/QC will be included in the QAPP Addendum.

Two strategies will be used to determine which samples are sent to the off-site laboratory for analysis:

- Locations/depths with readings of total VOCs above background, as determined from on-site field instrument results
- One or two locations nearest the residential area on the western side of Clinton Road, from the shallower depth (15 feet bgs)

If initial results of the soil gas survey indicate a change in the sampling depth would provide improved data, CDM will consult with EPA, NYSDEC, NYSDOH, and NCHD prior to any changes.

CDM will also assist EPA with obtaining access for the properties within the grid area.

Task 4 - Sample Analysis

4.3 Non-Routine Analytical Services

An estimated 34 soil gas samples will be analyzed by the subcontract laboratory (already procured for Roosevelt Field analytical work) by method TO-15.

Task 5 - Analytical Support and Data Validation

5.3 Data Validation

CDM will validate the analytical results from the 34 laboratory air samples. The vapor samples analyzed n the field with an organic vapor detector will not be validated.

Task 6 - Data Reduction, Tabulation and Evaluation

6.1 Data Usability Evaluation

CDM will evaluate the usability of the results for the 34 laboratory air samples. The usability of field screening soil gas results will not be evaluated.

6.2 Data Reduction, Tabulation, and Evaluation

The soil gas data will be input into the site database.

6.4 Data Evaluation Report

CDM will incorporate the soil gas survey results into the Data Summary Report.

Task 7 - Risk Assessment

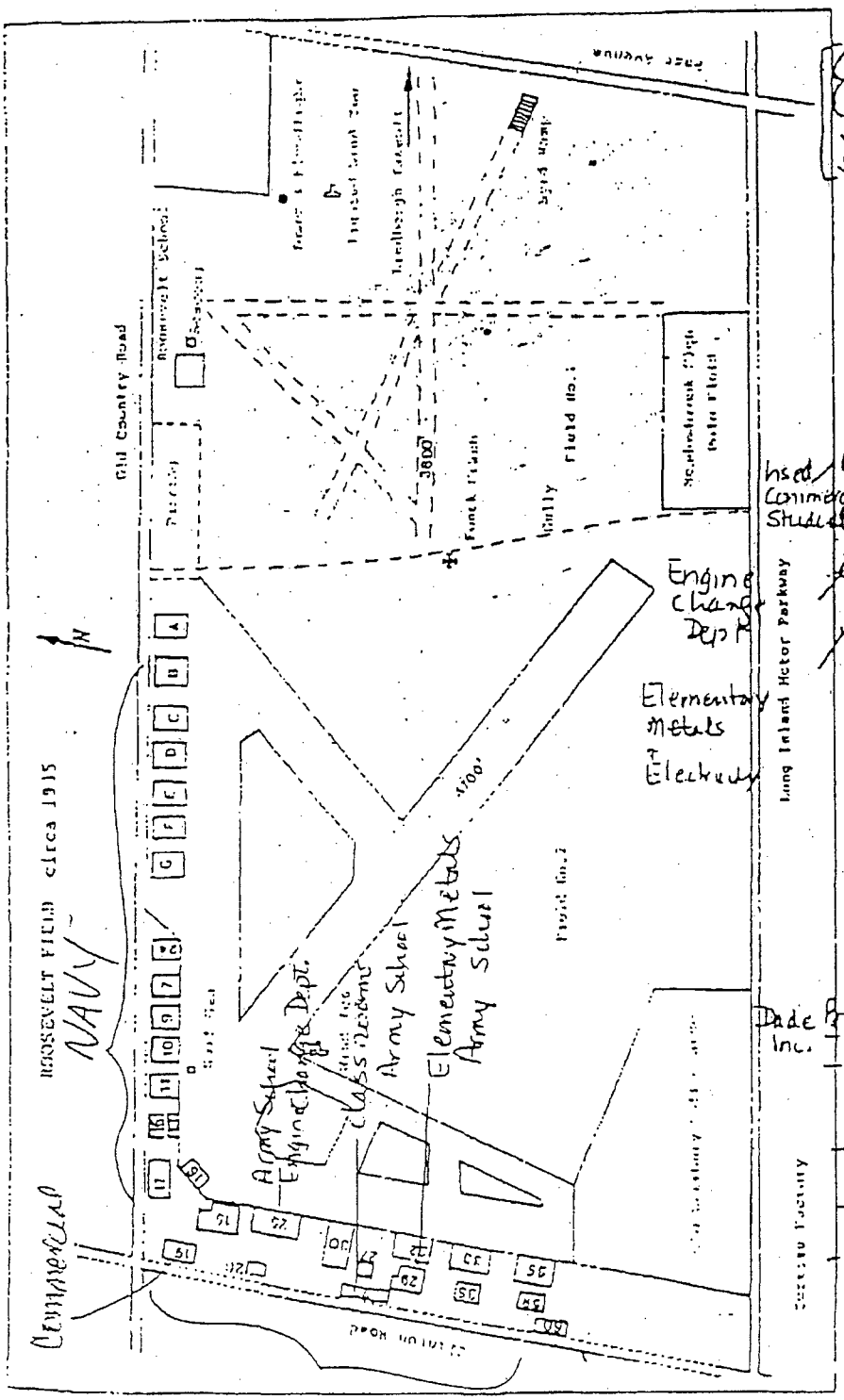
7.1 Human Health Risk Assessment

CDM will incorporate the analytical results from the soil vapor samples sent to the off-site laboratory into the Human Health Risk Assessment, as appropriate. A current-use exposure pathway for workers is already included for the Human Health Risk Assessment.

Task 9 - Remedial Investigation Report

9.1 Draft Remedial Investigation Report

CDM will incorporate the soil gas survey results into the RI report. Figures will be created to illustrate the results.



Roosevelt Field Buildings

7 Luscombe Sales / approved by Navy for acquisition
9 Waco Sales → Navy to acquire this
10 Steinman-Rintoul
11 Plane Owners Service, Fox News
13 Aircraft Radio Instrument Training, Waco Sales, Aeronautical Radio
15 Roosevelt Field Inn
16 Police Office, Drennan Photography, (Spirit of St. Louis stored here)
17 Aero Trades
18 Operations Office
19 Waco, Engine Air Service
20 Air Transport Equipment
23 Roosevelt Field Museum – classroom Army School
24 Gulf
25 Air Associates – Army School
27 Lear Inc. Engine Change Dept
29 Roosevelt Aviation School Army School
30 Roosevelt Aviation School
32 Dept. of Commerce, Munch & Romeo, Rappoport
33 Reich Air Service, Annette Gipson, Belfair
35 Joe Crane
55 Roger Wolfe Kahn (ROWEKA)
59 Roosevelt Aviation School
60 Roosevelt Aviation School

Concrete Hangars

A Atlantic Aviation Sales, Beechcraft, Cessna
B Safair School
C Engine Air, Leech Inc. (Stinson), Beckwith Havens (Fairchild), Licon Airways
D Monocoupe, Cordova-McKenna Aircraft Sales
E Aeronautical Radio Co., Howard Sales
F Foley, Pesler, Davis, Beechcraft, Instruction & Charter
G Potter Upholstery, Gregor

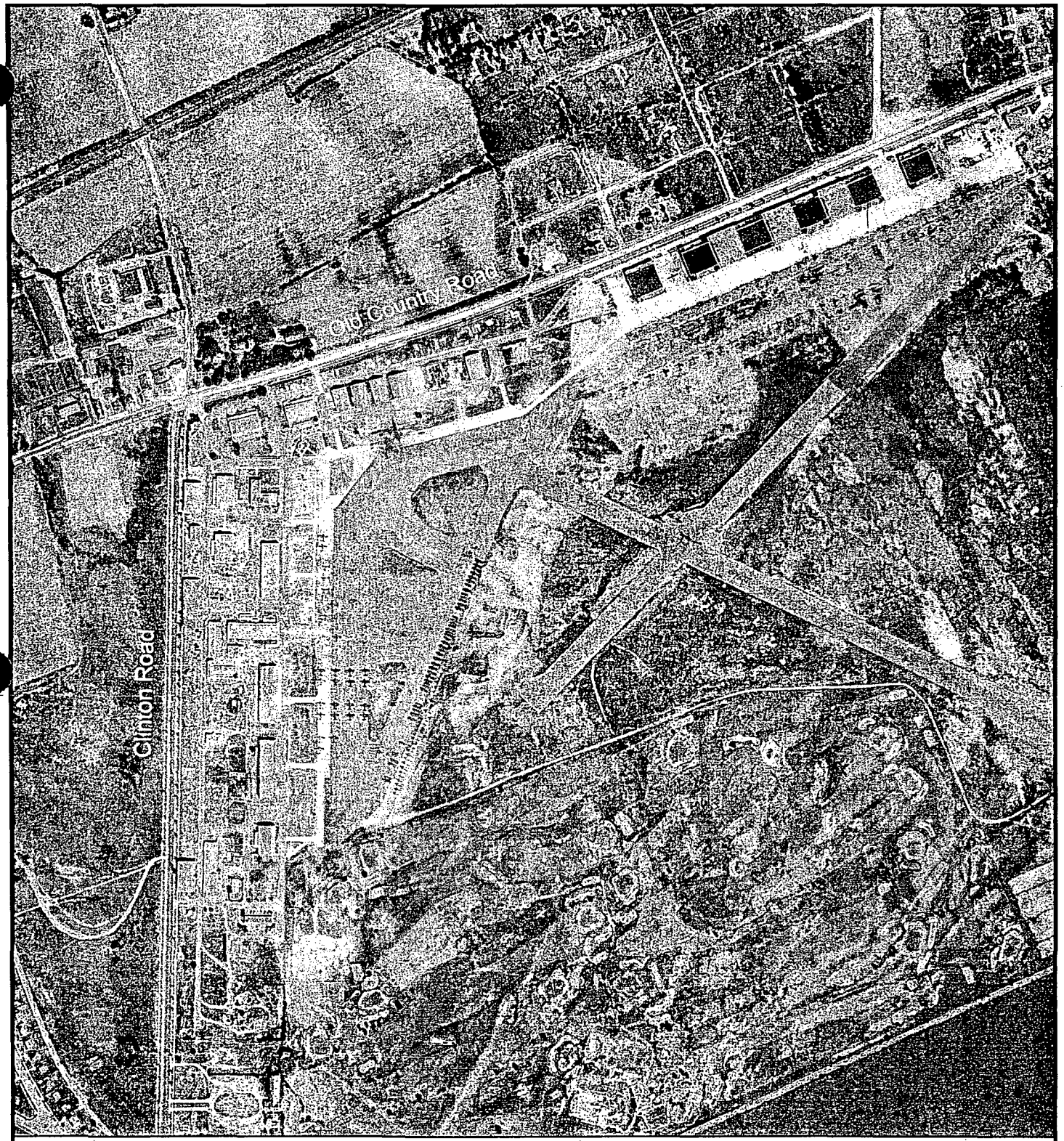
leased by Navy

1. Approved by Navy for Acquisition
2. Hydraulics Dept of Army School.

Source: HRS Document Package. Weston, January 2000.

Figure A-1
Roosevelt Field Buildings and Concrete Hangars, Circa 1935
Old Roosevelt Field Contaminated Groundwater Site
Nassau County, New York

CDM



OLD ROOSEVELT FIELD
HEMPSTEAD, NEW YORK
PIC 20202334S
CERCLIS ID NO. NYSFN0204234
DATE FLOWN: AUGUST 19, 1944
SOURCE: KVT FRAME NO. 59
ORIGINAL FILM SCALE 1:11,000
MISSION ID: RG 373-ON0009666
PPROX. PHOTO SCALE 1 inch = 520 feet

N

Figure A-2
Roosevelt Field Aerial Photograph, 1944
Old Roosevelt Field Contaminated Groundwater Site
Nassau County, New York

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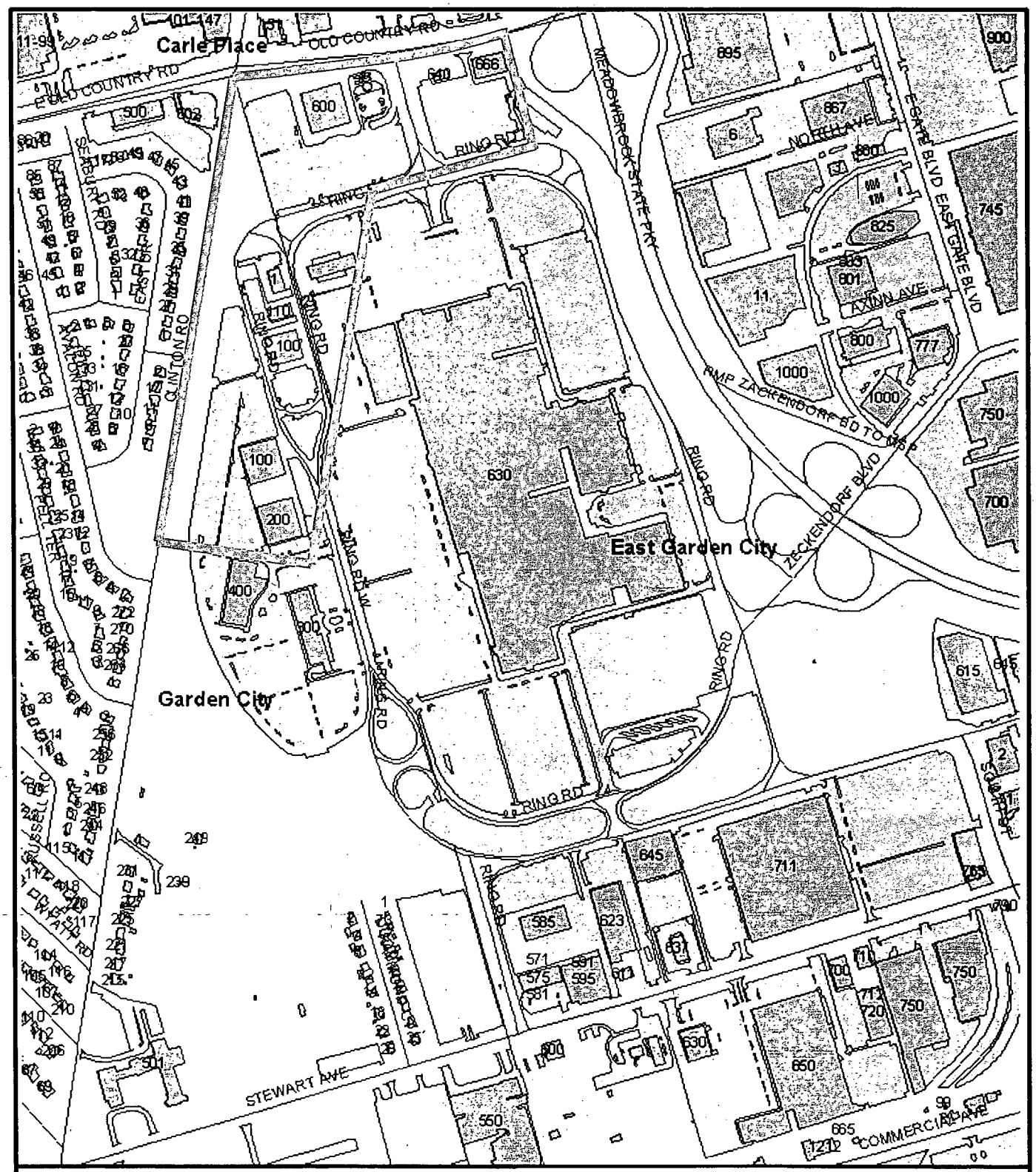

Legend

Buildings | Soil Gas Survey Area

Parking | Roads

Source: Nassau County GIS
Nassau County Department of Health

Key Map

N

0 500 Feet

Figure A-3
Proposed Soil Gas Survey Area
Old Roosevelt Field Contaminated Groundwater Site
Nassau County, New York

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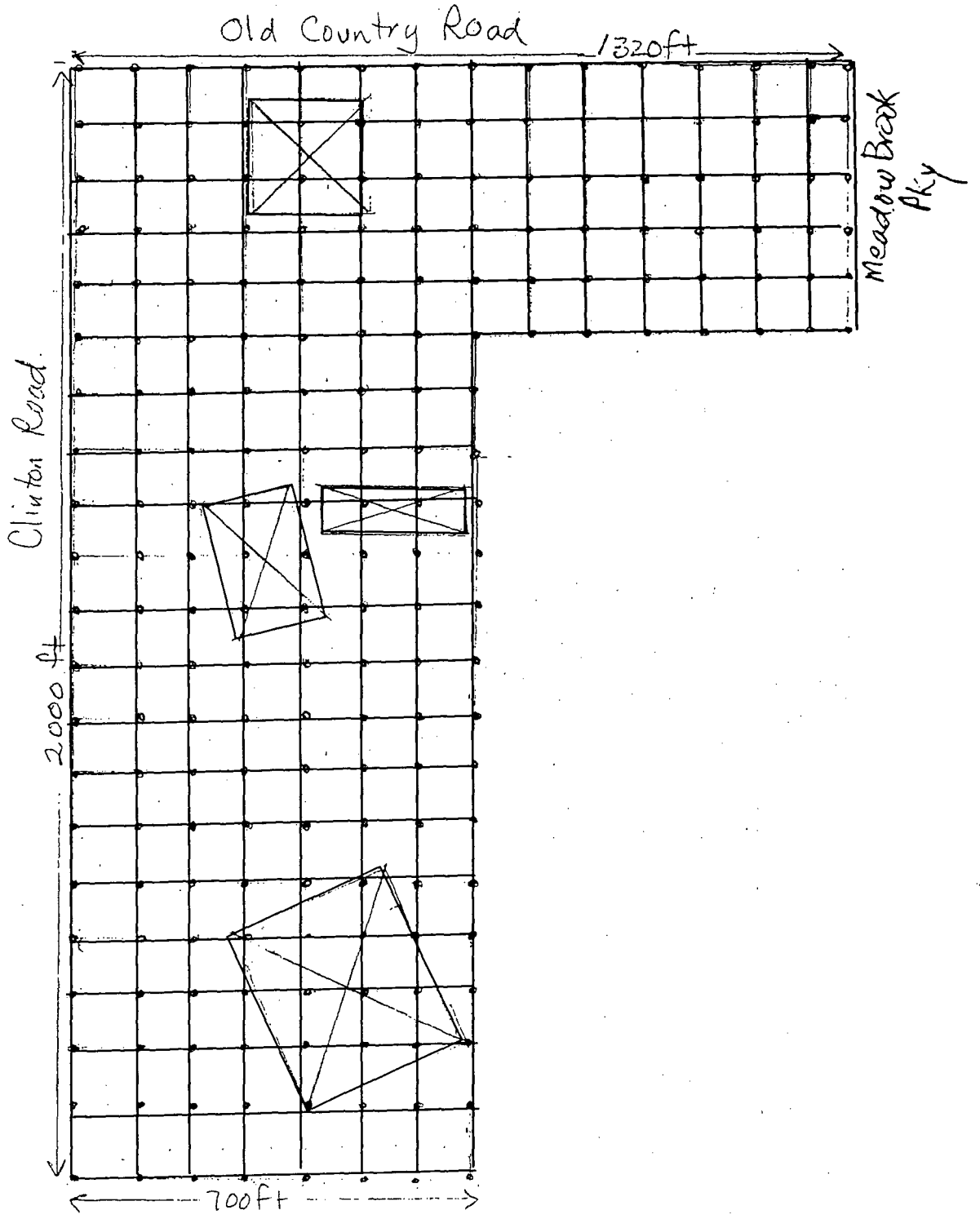

Approximate building locations

Figure A-4
Proposed Soil Gas Survey Grid
Old Roosevelt Field Contaminated Groundwater Site
Nassau County, New York

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